NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: Bently Family Limited Partnership
Dba Bently Agrowdynamics
P. O. Box 127
Minden, NV 89423

Permit Number: NEV2002505

Location: Kirman Tract of Bently Agrowdynamics
3000 Heybourne Road
Minden, Douglas County, Nevada 89423

Located North of Minden and East of the Carson River,
Township 14N, Range 20E, Sections 17, 20, & 29 MDB&M

Location of Discharge from Export Pipeline to Kirman Tract:
Latitude: 39° 03′ 30″ N
Longitude: 119° 46′ 00″ W

Wellhead Protection

The Bently Agrowdynamics Kirman Tract effluent reuse site is not within an established wellhead protection zone around a public water supply. The facility is within the 6000 foot buffer zone around one public water supply well in the Indian Hills General Improvement District system. However, the Carson River provides a hydraulic barrier between the reuse facility and the wells.

General:

Bently Agrowdynamics, a part of the Bently Family Limited Partnership (Bently), operates agricultural fields in northern Douglas County, east of the Carson River. Previously, the tract was supplied with secondary treated and disinfected effluent by the Incline Village General Improvement District for irrigation use on approximately 275 acres of the 1,560 acres commonly known as the Kirman Tract. In 2007, Bently submitted an application for renewal and modification of the existing permit to reflect a new effluent supplier and irrigation practices. The application proposed the use of secondary treated, denitrified and disinfected wastewater effluent to be supplied by the Douglas County North Valley Wastewater Treatment Facility (NVWWTF) under Permit NEV60025. Effluent is to be applied via flood irrigation.

Under the modified permit, the effluent is delivered via the NVWWTF irrigation 24 inch diameter transmission pipeline, and is delivered directly to the irrigation system mainline. The delivery system includes a double valve control system, with one valve controlled by Bently and one valve controlled by NVWWTF. An Ultra Mag magnetic flowmeter is installed in the delivery line between the two valves. Effluent is conveyed via the underground mainline, which varies from 15 to 24 inches in diameter, to the irrigation laterals, which also vary between 15 to 24 inches in diameter and are installed at ¼ mile intervals along the mainline. Irrigation water is distributed using low head valves along the length of the lateral lines.

Because the reclaimed water to be supplied by NVWWTF is insufficient for crop requirements,

groundwater from a well owned by Bently will also be used for supplemental irrigation purposes. Water will be supplied from a well west of the irrigation site to an on-site 120,000 gallon storage tank, which is constructed with an air gap to prevent backflow. Fresh water will be fed into the system by pump as needed. As stated, effluent, and fresh water as needed, is dispersed to the fields under flood irrigation.

Appropriate tail-water and emergency containment measures are in place. Should irrigation water accumulate within the tail-water collection area at the northwest perimeter of the tract, the collected fluid will be pumped back into the mainline and dispersed to the fields for uniform coverage. Restrictions on irrigation of frozen or saturated soils will be applied, minimizing standing water in the fields. Effluent from NVWWTDF will meet or exceed the State of Nevada standards for Category B Reclaimed Wastewater. Therefore NDEP will not require a buffer zone for the flood irrigation of the Kirman Tract.

Bently Agrowdynamics cultivates various small grain and forage crops on the Kirman Tract acreage. During the period from 2002 to 2006, barley, Sudan grass, wheat and canola have been grown. The crop nitrogen requirements and the hydraulic loading requirements for the specified crops have not been exceeded by effluent application. The ground was left fallow in the 2007 growing season.

Receiving Water Characteristics:
Water below the site has been encountered at 5 to 13 feet below ground surface, as evidenced by measurement of groundwater monitoring wells MW1 (immediately downgradient of application site) and MW2 (downgradient of application site, adjacent to Carson River). The water is of generally good quality, with the following analytical results for the period from 2004 to 2007.

Parameter		Average	Maximum Reported	Minimum Reported
MW1	Total Dissolved Solids (mg/l)	658	1200	250
	Chlorides (mg/l)	52.5	69	8.5
	Total Nitrogen (mg/l)	1.47	2.3	<1
	Nitrate as N (mg/l)	1.06	2.1	<0.5
	Depth to Groundwater (ft)	8.7	11	7
MW2	Total Dissolved Solids (mg/l)	750	1400	320
	Chlorides (mg/l)	32.3	44	16
	Total Nitrogen (mg/l)	0.96	3.4	<0.2
	Nitrate as N (mg/l)	0.56	3.3	<0.05
	Depth to Groundwater (ft)	8.14	13	5.2

Effluent Flow and Characteristics:
The facilities at NVWWTF went through major upgrades during the summer of 2007, to improve efficiency and to install denitrification equipment. DMR data reported since June 2007 is summarized in the following table:

Parameter		Permit Limit	Avg	Max	Min
Total Suspended Solids (mg/L)	Daily Maximum	***45***	16.1	49	<5
CBOD5 (mg/L)	Daily Maximum	***45***	14.7	60	4
pH (Standard Units)	Daily Maximum	***6.0 to 9.0***	7.69	8.32	7.17
Fecal Coliform (CFU- or MPN-/100 ml)	Daily Maximum	***240***	5.35	8600	<2
Nitrate as N (mg/l)	Daily Maximum	***Monitor & Report***	6.67	17	1.9
Total Nitrogen (mg/l)	Daily Maximum	***10***	9.46	22	4.3

Proposed Effluent Limitations and Special Conditions:
NDEP proposes the following permit limitations and monitoring requirements:

Table I: Irrigation Reuse Limitations and Requirements

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Maximum Effluent Application (Acre Feet/Year)	750 Total effluent volume applied shall not exceed the agronomic rate for the specific crop planted as listed in the EMP.		Continuous	Flow Meter and Calculation
Flow (MGD)	Monitor & Report	6.5	Continuous	Flow Meter
$CBOD_5$ (mg/l)	30	45	Weekly	Composite
TSS (mg/l)	30	45	Weekly	Composite
Fecal Coliform (CFU or MPN/100 ml)	2.2	23	Weekly	Discrete
pH (Standard Units)	6.0 to 9.0		Weekly	Discrete
Total Nitrogen (mg/l)	Monitor & Report		Weekly	Discrete
Total Nitrogen (Pounds/Acre)	Total Nitrogen applied shall not exceed the agronomic rate for the specific crop planted as listed in the EMP		Annually (4^{th} Qtr Report)	Discrete

TSS = Total Suspended Solids
CFU = Colony Forming Units
MPN = Most Probable Number

EMP = Effluent Management Plan

Groundwater monitoring is required. Monitoring wells MW1 and MW2 shall be monitored and limited according to the following:

Table II: Groundwater Monitoring

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
TDS (mg/l)	Monitor & Report		Quarterly	Discrete
Chlorides (mg/l)	Monitor & Report		Quarterly	Discrete
Total Nitrogen (mg/l)	10		Quarterly	Discrete
Nitrate as N (mg/l)	Monitor & Report		Quarterly	Discrete
Total Phosphorous as P (mg/L)	Monitor & Report		Quarterly	Discrete
Depth to Groundwater (feet)	Monitor & Report		Quarterly	Discrete
Groundwater Elevation (feet Above Mean Sea Level)	Monitor & Report		Quarterly	Discrete

TDS = Total Dissolved Solids

Schedule of Compliance

The Permittee shall achieve compliance with the effluent limitations upon issuance of this permit.

1. **By MMM DD, 2008,** the Permittee shall submit a new Effluent Management Plan for the facility.

Rationale for Permit Requirements

The permit limitations and monitoring requirements proposed by this permit are consistent with requirements to protect groundwater quality.

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwaters of the State of Nevada subject to the conditions contained within the permit is being sent to the **Nevada Appeal** and **Record Courier** for publication. The notice is also being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline at the Division for the receipt of all comments pertaining to this public notice period is **5:00 PM, May 27, 2008.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.
The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination
The Division has made the tentative determination to renew the proposed permit for a period of five (5) years.

Prepared by: Janine O. Hartley
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